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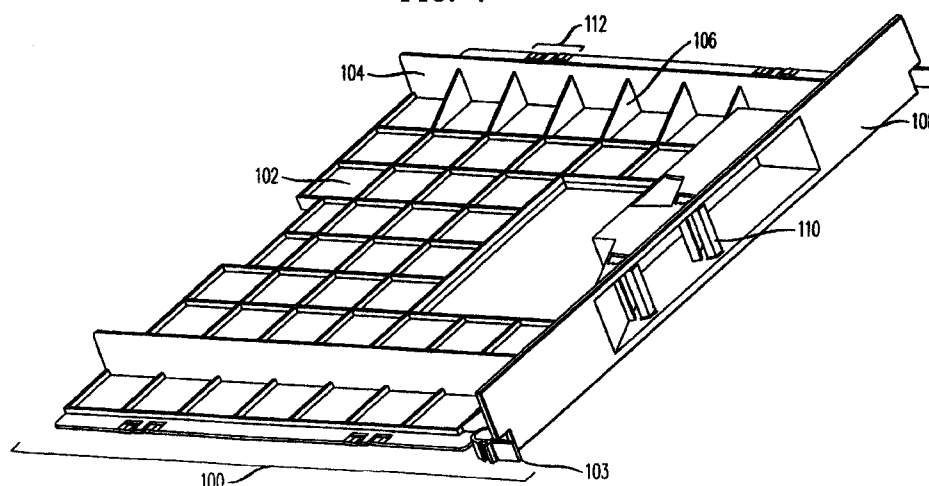
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(54) **Electronic equipment shelf with blank for unequipped position**

(57) A circuit pack blank occupies an unequipped position in an electronic equipment shelf that is cooled by forced-air convection. The blank incorporates two diffuser blades that protrude into a cooling space in the shelf adjacent to the blank. When air is forced through the cooling space at a constant velocity, a backpressure

is generated that is equivalent to backpressures generated at cooling spaces adjacent to equipped positions. In addition, the blank has a faceplate that incorporates one or more cable trays used to retain cables at the unequipped position for future use.

**FIG. 1**



**EP 1 028 610 A3**



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# EUROPEAN SEARCH REPORT

Application Number  
EP 00 30 1012

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 4 620 265 A (LERUDE GERARD ET AL) 28 October 1986 (1986-10-28) * the whole document *	1-10	H05K7/14 H05K7/20
A	WO 98 21922 A (BILLENSTEIN ERNST ;SCHAFER KURT MICHAEL (DE); KOERBER WERNER (DE)) 22 May 1998 (1998-05-22) * the whole document *	1-10	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H05K
The present search report has been drawn up for all claims			
Place of search <b>MUNICH</b>		Date of completion of the search <b>13 March 2001</b>	Examiner <b>Van Reeth, K</b>
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4620265 A	28-10-1986	FR 2559335 A	09-08-1985
		CA 1245333 A	22-11-1988
		DE 3563296 D	14-07-1988
		EP 0155856 A	25-09-1985
		JP 60182799 A	18-09-1985
WO 9821922 A	22-05-1998	DE 29619482 U	11-12-1997

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